

SUGAR and DLANTATION



SECOND DAY'S SESSION OF SUGAR ENGINEERS DURING SEPTEMBER

Ends With Visit To "Best Machine Shops West of Chicago"

trued and reground.

tions in Hawaii

The best feature of the shre-lder is

other trifles in the cane so that the

chows everything breakable

chains that have been subjected to

strain must be annealed, and blocks frequently inspected. E. Kopke ex-

plained the theory of it. When a

chain is subject to strain the pitch

sprocket and troubles follow.

'combination patent'' only.

the program, and the chemists present

it out for three months, one time,

battery of twenty filter presses and

clarified juice will go direct from the

"Double pressing is more satisfactory

E. Kopke told of the difficulties that

had arisen in the use of the Kopke

clarifier. The original construction was faulty and improvements suggest

ed by use have been made. The chief

difficulty met with is that the juices are "streaky." If the juices were uniform the machine would do the work

but juices are never uniform and so

results are variable. William K. Orth

of Koloa said they are still using the

battery of eight Konke clarifiers or

changed the subject.

Chemists Abuse Engineers

Half said, "a chain is always dangerous thing for heavy lifting.

PROGRAM FOR TODAY 9 a. m.—Third meeting of the Convention at the Library. Subjects to be

SECOND DAY'S SESSION At the Sugar Mill Engineers convention yesterday morning the first report-considered was that of the committee.

considered was that of the committee on milling.

Renton Hind said in opening the debate that the tendency in grooving seems to be to reduce the pitch, and depth of the grooves on the feed rollers and make those on the discharge rolls.

Photographs and sectional drawings. Renton Hind said that to give an idea of the work the shredder does, he had crawled into the one at Punnenc and counted the hammers. There are six some of eighty-four hammers cach, or 504 in, all. The shredder works at 1500 are possible to the control of the committee. depth of the grooves on the recult rolls | 504 in all. The suredger and make those on the discharge rolls | 1806 revolutions per minute, so the desper and narrower. William Wyllie cane in that time receives 907,200 of Onomea said he is now making the grooves in the bugasse roll one eight inch wide and one and one-quarter inches deep. Using two sets of scrapper cent less water in the bagasse. The Last Three Per Cent

In answer to a query as to whether this reduction of moisture content was synonymous with greater extraction, R. S. Norris said he did not follow the argument made by J. P. Foster last week at the chemist's meeting, but believed that a final reduction of water content resulted in actual increase of sugar recovered. This increase apparertly totals two-tenths to three-tenths per/cent where the water content is reduced three per cent when the total ex- changes and the links stretch. traction runs around 97 or 98. He did sprocket on the contrary remains fixed, not believe the losses in moisture due Hence the chain tends to ride 'he not believe the losses in moisture due to the use of double scrapers. Renton Hind thought the value of double scrapers to be that they eliminate trouble. The variety of cane has a lot to do with it. Mr. Wyllie said the in marine and gun shops when great is good in Michigan and adjoining

Joseph Wyllie of Pepeekeo thought that whether the roller is soft or hard has something to do with the need for double scrapers. As a matter of fact, he said, there is no use having the Messchaert groove if the grooves are not kept clean. If they are kept clean there is no disturbance in the flow of the inice and no flooding back. Thomas there is no use having the the juice and no flooding back. Thomas Murray of Paauhau, said the scrapers Hawaii said he knew of no reason why reported from Kau and Kohala. in the first roll last a long time. In the juices from the different mills the bagasse roller grooves they have to be changed every four or five days.

Does It Par? oes It Pay?
Chairman Hind then directed atten were worked separate. Nothing came How To Save Oil

though grooving the rolls shortens heavy juices happens to be just exact their life very materially. Hornes by the other way about. R. S. Norris Johnson took the contrary view. "I said the same and added that very am commencing to doubt," he said, large gains would have to be demon-'whether it is profitable to try for strated to cause any change in meth higher extractions now that we have ods to be made. In Australia the juic Passing on to the Hind-Renton lem, he said. Horace Johnson took

groove and east steel rollers, Louis a whack at the idea and testified that Kenton said that a mill set which has Kenton said that, a min set which hearty to show that they been in use all of one season shows very hearty the chemists then knocked hearty the chemists then knocked hearty the transfiguous liming." dence of wear was a slight rounding spots out of the "continuous liming" off at the top of the grooves. At the process. William Ebeling said he tried close of the season the bottom of the grooves were still black. No scrapers "Then my sugar boiler got disgusted were used, that being the advantage claimed for the Hind-Renton invention gates chortled. The engineers then Gun Metal Return Bars.
In answer to Horace Johnson's quas.

Changed the subject
Filters And Things.

tion about the substitution of gun Excelsior filters have been mostly restal for steel bars Renton Hind said discarded, they stated, but Mr. Duker the reason for using a softer bar is said he cannot get slong without one, that steel cuts steel. The gun metal to strain the impurities from dirty bar works well if the hardened rough jnices. At this point Renton Hind surface is left. If the bar is planed said that Pounene has installed a new smooth it wears out too quickly. E. Kopke said that was the fault of the next senson will filter all clarified McKubbin bars. They were too soft. juices, using Kieselguhr, and cutting The bars ought to be hard rather than out the evaporator supply tank. The

The Paauhan double pinions were discussed by E. Kopke, T. Murray and W. O. Hall. Mr. Kopke went into the theory of so adjusting a roller that there should be no torsion but there is simply a matter of dilutions." he said. no way of testing it out. "Wear is the only index of the pressure on a because it uses less water."
pipion tooth," be said. The chief val. of the double pinion is to take car-of the shock when a shaft breaks. With this Mr. Hall agreed, saying that the double pinion might save a broken

Straight-Away Carriers. The Ramsay Intermediate Carrier was declared to be behaving extremely well but needs to be raised about four inches. R. S. Norris spoke of the wearing of the toe of the Ramsay seemper. G. Hall said that defect has been eph Wyllie has changed the drive to the discharge end thereby greatly im-

device. The first Kopke heater was installed in Libne mill back in the The warning given by shafts before breaking was debated. Sometimes the entirety it can not be called a new in Popular Theater. journals get hot and again they don't. vention, he said. It is better than They will meet for business again at quent exorbitant prices, and the prob Hence there will be no return of con

I the fact that the cylinder must be The estimates of the department of General Tone Stronger Because discussed:

Rollers and Furnaces, 9 to 10:30 a. m.
Sugar Room Machinery, 10:30 to 12 m.
3 p. m.—Baseball game at Molilli Park between teams selected from the Hawalian Engineering Association and the Hawalian Chemist's Association.

The testing of shaffs was debute!, W. G. Hall and E. Kopke told what tests are used in machine shops and a corn erop closely approaching the record. The returns to that decrusher have been tried out at Puha'a partment indicate a production of approximately three hillion bushels of thick, and brushes off any iron that the magnet catches, Mr. Wilson statement of the department of magnetality and a corn erop closely approaching the record. The returns to that department of the dep Swing Hammer Shredders ley, and a hundred million tons of hay,
The five Searby shredder installatiff the twenty million estimated tons of

tions in Hawaii were described at length by W. G. Hall who showed Photographs and sectional drawings. wild hav, a crop not heretofore reported upon, be included. According to the reports received by the department, prospects improved The conditions during the month were generally favorable to the maturity of grewing crops, to harvesting and to fall plowing. The proportion of warm the and sunny days was higher than in prior mouths, though there were rather general storms toward its close.

Beet Prospects

Sugar Cane that if detects chains, ear links and The condition of sugar cane, which was poor, 74.4 per cent, on September mill can be stopped in time to take them out. W. W. Wescoutt testified on this point. He said the shredder simp-1, continued to Meeline during that month and on October 1 was estimated at 67.4 per cent, compared with an average of 85.6 per cent, being 65 per Rope Stronger Than Chains Blocks and chains were the next last month and 87 per cent average. The hurricane of September 29, which subject discussed. All agreed that swept the cane belt of Louisiana, did considerable apparent injury, but the best informed opinion is that the benefit of the heavy downpour of rain, and the better weather following the storm, will compensate for the damage and possibly more than offset the immediate loss to the crop.

Sugar Beets Are estimated to have fallen off a fraction to 91 per cent of normal, very

Searby's invention is protected by a has had the least rain of all the Islands: the "valley showers" that have benefitted Honolulu not having extended Clarification from the engineers stand point was the next subject on generally to the cane fields.

Kauai has had enough rain to fill all the reservoirs but the fields could stand more moisture. On Maui the ditches are running bank-full with water to spare. Good growing rains are

from thirteen gallons to 4.3 gallons per day, and J. Meinecke said he has cut the lubricating oil bill in half at Paia

reached 97 per cent. Theoretically it es have been kept separate because evaporators was debated as caustic they make white sugar from the first soda does not saponify it. Mr. Kopke tons, against 600,307 tons and 705,822 the bags unless clarification can be inice. E. Kopke said that juices vary said the best practise is to fill the tons for the two previous years, respectively improved."

Leading the distillate is thrown away the cost in the tons for the two previous years, respectively improved."

Leading the distillate is thrown away the cost in the distillate is thrown away the cost in the tons for the two previous years, respectively improved." the distillate is thrown away the cost of a couple of drums is less than that The demand at of taking out the tubes to clean them. R. S. Norris referred to the fact that at Pain the company had hired an oil basis. Other dentations would gain of shipment. by doing the same thing.

Various Invitations
An invitation from the trustees of hameha School shops and chairman stated in the contract irrespective of The former will be as promptly Hind suggested that the delagates look what the price may be on date of ship- served as the producers are capable of, over the splendid equipment before ment or when sugars arrive at destina-turning home. A letter from Governor tion. For outstanding contracts in an uncertain factor, will go far to been the guest of honor. He regretted

Paul Super, secretary of the Y. M. tion during their sojourn. Chairman for distribution in what is known as in both classes. Other outlets for Cen Tied then sunounced that the Mikahala will not leave for Kauai until Buffulo and Pittsburg. ten o'clock Thursday night. Visited Naval Station Shops

Through the courtesy of Rear Admiral Chifford J. Boush, commandant paign only eight or ten days later than of the Naval Station, the engineers, some sixty strong, visited the great machine shops at Pearl Harbor yester day afternoon. They left Honolulu by prospects are now for a good average States is at a standstill and will be special train at 1:45. At Pearl Harbor if not full crop. The official Hungar until the war ends because possess. they were received at the administration building by Lieut. Glen S. Burrill. September 13, reports the development representing the commandant, and were conducted through all the shops Next they inspected the dry dock, coal- strong. ing plant and the fael oil storage and lack of attention some harm has Lewis said. These who find themselve alant, returning to Honolulu at five recognized and the new model meets iginally installed. The invention has o'clock. The U. S. Naval machine dry, warm weather is desired. shops at Pearl Harbor are the finest. Advices from Russia state

mests of C. B. Gage, manager of the have their attention mostly divided beeighties and is still in use, so in its Gregg Company at the concert at the tween the alleged manipulated scarci- that they changes are bound to come

SUGAR GOES BACK REFINED DEMAND **GOVERNS** PRICES

Department of Agriculture Fig- First New Crop Sales For Januures Decline In Cane and ary Delivery At Four Cent Level

> Conditions Abroad New York sales for the week end-

Of Changing Sugar Crop

ing October 14 were 203,000 bags Ca-ban and Porto Rican raws. Willett & make a comparison of prices as of that date this year and a year ago showing raws one-half cent cheaper this year than last, Granulated was earing september for all these crops, being 0.792 cents now and 1.37 cents 000,000

last year, an increase of 38,652 tons from last year. Willett and thray's report states, in part, that business thus far on the advance has been about moderate, and the market can scarcely be called settled on any new basis until considerable further business is done. The coming week will show whether the advance can be maintained or whether lack of interest by buyers will return cent in Louisiana against 72 per cent the market to its former declining tendency until a level is reached somewhere below 3c.e.&f.

First January Sales Some interest has been shown by speculators recently for new crop sugars, pacticularly for January shipment. Sales were made at 3.89c then advanced to 4.08c and declined to 4.01c. Advices from England state that sales of new crop sugars have been made to that country to extent of 200-250,000 tons.

The visible Cuban production to end of September is 2,532,987 tous, or 2,560-335 tons. The receipts of the week are

Cuba point to a record crop for 1915- pound 16. Visible production to October 9 1880. is 2,536,603 tons against 2,564,335 tons Changes in Economic Position last year, or a decrease of 27,732 tons. The following table presents the lead Javan Exports Heavier

ember exports to Europe as 80,000 tone, preceding year: which rather more than makes up for the July-August exports, which were (Millions of shorter than anticipated. The total ex. World's sugar product. 42,053 ports of the crop to Europe now stand, U.S. cane sugar product.

at 230,000 tons.

It will no doubt, be recalled that the U.S. impts.: Cuban.... 4 927 exports of Europe in August, 1914, were only 5,490 tons, but after the large purtion to George Duncan's question, 'does it pay?' He said that his own mind is made up that it does pay even theory of the settling of light and cut down the oil consumption at Ewa September shipments made up that it does pay even theory of the settling of light and cut down the oil consumption at Ewa September shipments made up that large September shipments made up the large total of 212,546 tons. The shipments to eastern countries amounted to 136 installing forced feed instead of the | 000 for the month of September, 1915. The whole crop this season is being old fashioned cups.

How to get mineral oil out of the shipped in record time, the total of tons, against 600,307 tons and 705,822

The demand at 4,900 less 2 per cent somewhat improved the refined market, the discontinuance of the recent privexpert who had made tests and had liege of withdrawing contract sugars reduced mill lubrication to a scientific at the basis of the price on the day kets having practically passed out of

Pinkham thanked the engineers for voices will be rendered and deliveries make the market strong and repay the their invitation to attend the banquet made on the basis of prices prevailing producers for the extra expense in pro-Thursday night where he was to have at the opening of business Monday, due too, due to higher wages, dearer been the guest of honor. He regretted October 11, 1915. All the other rethat his condition did not permit his finers issued a similar notice.

Domestic best refined of Michigan port. The export returns to accessible and Ohio new erop manufacture was countries show declines to Finland in

> European Beet Crops Abroad, F. O. Licht reports that German factories will begin their camusual. The bright sunshing fall wen-terday that in all probability and yields. In Austria-Hungary the it Legan. Business in the United ian statement on the beet stand to not know what to do with their money September 13, reports the development Actual capital invested in the so of the beets as everywhere good. The called "war industries" has probably

Advices from Russin state that in to ket heavy losses,

In no ket heavy losses,

In all the usual lines of commerce Mr. Kooke then explained his heater was levice. The first Kooke heater was Last night the engineers were the change of any note. Sugar circles ty on the inland market, with conseof the area affected by military activi- be repressed until the time comes.

CONSUMPTION UP TO **86 POUNDS PER CAPITA**

Commerce Bureau Estimates Show Increased Use of Sugar Since War

More than one fifth of the 40,000,000. 000 pounds of sugar that represent the world's production last year was consumed in the United States. The con sumption of sugar in the United States exclusive of its sugar producing islands during the fiscal year ending June 30 1915, has been calculated by the bu reau of foreign and domest e commerce. department of commerce, as 8,630,000, 900 pounds, or 86 pounds per capita. Hawaii Crop Quarter of Cuban

Of the sugar consumed in this coun 4.802 this year and 5.88 in 1914, the try in 1914-15, 1,941,000.000 pounds difference between granulated and raws were produced on the mainland, 1,281, pounds in Hawaii, 589,000,000 pounds in Porto Rico, 327,000,000 pounds Stock in the United States and Cu- in the Philippines, and the remainder ba together of 506,507 tons, against in foreign countries. Cuba, the leading 532,823 tens last week and 467,855 tens, source of imported sugar, sent United States 4,785,000,000 pounds in the last fiscal year, that quantity being nearly four times as much as that from Ha waii and eight times as much as that from Porto Rico.

Beet sugar now leads cane sugar by nearly 1,090,000,000 pounds in the year ly domestic product, having reversed the conditions which obtained 20 years ago. In 1895, for example, according to the statistical abstract of the Unit ed States, the domestic sugar product totaled approximately 775,000,000 pounds, the share of beet sugar being only 45,000,000 pounds. Beets to the Fore

In 1915 our sugar product had in reased to 1,941,000,000 pounds, share of beet having grown to 1,448,-000,000 and that of case having de creased to 493,000,000 pounds. Meantime beet sugar has practically disaypeared from United States imports.

Eighteen years ago when the Cuban supply of cane sugar was cut off by

ing changes is Our Batavia cable reports the Sept- sugar in 1914-15 as compared with the

(Millions of pounds) 601 493 18. beet sugar product 1,467 Hawaiian 1.115 Porto Rican 641 1.281 Philippine 327 309 S. consump. of sugar 8,794

ties, which have put the Polish contingent out of the question, and menace other areas in the Southwestern listrict, including Kieff. Prohibition Increases Sugar Consump

tion

With the uncertainty thus prevailing, the autlook for the 1915-16 campaign becomes more and more problematical, and buyers and sellers con-On Monday the refiners announced (emplate both the immediate future and later from a rather speculative point of view. The convention marview, the home market becomes the One refiner gave the following no- chief subject for consideration, with its army demand on the one hand and "For all contracts entered on and the expected larger civil demand on the B. P. Bishop Estate was read ask- after Monday, October 11, 1915, in- account of the reduced consumption ing the engineers to visit the Kame. voices will be rendered at the price of alcohol on the other.

race material and the irregularities in delivery through disorganized trans-C. A. extended an invitation to the placed on the market on Monday at both raw and refined sugar. Baku, as members to make use of the institute 4.65c per ib. (4c under Cane refined) an extent uset also society.

BUSINESS CONDITIONS

A. Lewis Jr., manager of the Bank of Hawaii, expressed the opinion yes ther has much improved crop prospects European war will end as abruptly as if not full crop. The official Hungar- until the war ends because people do leaves are luxuriant and the roots been fully discounted in the price Owing to the plentiful rain charged for goods manufactured, Mr been done by weeds. For the ripening bothers of these stocks, should the war

fighting is over. Everyone recognizes but what they will be no one can say. Discussion of the life of a leather in the Deming heater because it is a com- nine this morning at the Library of able effect of the continued extention fidence and all normal activities will be repressed until the time comes.

PLANTATION PROFITS FOR PAST TEN YEARS

The San Francisco Chronicle says whose stocks are listed on the San Francisco Stock and Bond Exchange, have paid in dividends during the last ten years \$23,835,000; or 125.5 per cent on their aggregate capital, an annual average of 12.5 per cent. This statement is made up from the records of the companies for the period from January 1, 1906, to October 20, 1915, and includes come dividends declared but not yet payable. The complete records for 1915 would somewhat increase the figures presented.

The Hawaiian Commercial and Sugar Company has paid \$12,560,000 or an annual average of 12.56 per cont; the Hawaiina Sugar Company has paid \$5,450,000, or an annual average of 18.17 per cent; the Onomea Sugar Company has paid \$2,685,000, or an aunual average of 17.90 per cent; the Hutelrinson Sugar Plantation Company has paid \$1,650,000, or an annual aver- Help From Other Sources age of 6.60 per cent; the Paguhan Sugar Plantation Company has paid \$1,490,000, or an annual average of 7.45 per cent.

LIME SILICATE BETTER

Recent laboratory experiments by W. H. MacIntire and L. G. Willis indicate that silicates of lime and magnesium are much more satisfactor forms in which to apply these elements for crop production than the earbonates. In one soil a mixture of these two silicates increased the growth above that obtained from either silicate alone. When carbonate of lime was used with silicate of magnesium the combination was decidedly detrimental to growth.

Experimenting with red clover the to do with it. Mr. Wyllie said the greatest effect comes from using double scrapers on the last mill. The depth of groove is the controlling factor, he maintained. If single scrapers will single scrapers will single scrapers will single scrapers will sharp in marine and go.

States, except to good in Nebraska and Kansas, very compared with 11,000 same week a good in Idaho and California, lowered by leaf spot in Colorado, and sugar spects always give warning before they that is necessary.

States, except to good in Nebraska and Kansas, very compared with 11,000 same week a good in Idaho and California, lowered by leaf spot in Colorado, and sugar content lowered by late rains starting. The convention returned to the subtract of the subtract of the convention returned to the subtract of the s say in their conclusion that "there is those products, weather is reported as fair and unset vear 1915 they aggregated 582,000,000 every indication that lime mileate is tled, but all indications received from pounds, compared with 22,500,000 decidedly superior to lime carbonate. every indication that lime afficate is Tariff Por Revenue Only pounds in 1900 and 40,500,000 pounds in both in its effects upon plant growth tary of the treasury have consented to and as a form tending to conserve lime in soils.

ed the matter, states that men employ-1913-14 1914-15 ed in the Paris sewers are as healthy law. 40,424 men in that city are so, free from they may give their consent to other zymotic diseases.





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FREE-FOR-ALL FIGHT IN NEXT CONGRESS

that five Hawaiian sugar companies, Other Industries See Chance of **Getting Protection Along** With Sugar

> The Washington correspondent of the Portland Oregonian in a letter dated October 13 says that President Wilson having concurred in the view of Sec-MrAdoo that the free-sugar clause of the Underwood tariff law should be repealed and the so-called war tax' be continued in effect until the close of the war in Europe, a freefor-all tariff fight is assured in the Senate next session, with prospects that schedules other than sugar may be altered. There is no means under the rules of the Senate to prevent the offering of any pertinent amendment to any bill under consideration.

> This affords an exceptional opportunity to transfer lumber, wool and other Western products from the free to the dutiable list. Likewise, any amendments proposing to increase the duty on any commedity which is now lightly taxed will be in order. Only a rigid control of the Democratic majority of the Senate will be able to prevent general revision.
>
> 'How far the administration will be

> willing to go in revision of the Underwood bill is not yet known. There is a prospect, however, that the adninistration will not be averse to certain other changes, though what they will be no one is authorized to say. Trade Commission Reports

"If the administration gives its con-sent to the change of other than the sugar schedule, lumber and dye stuffs likely will receive first consideration. It is known that at least one Demo eratic member of the federal trade com-mission who recently investigated the condition of the lumber industry has been convinced that congress should impose some duty on lumber, espe cially with a view to relieving the situntion in the Pacific Northwest,

"The general concern of the administration in building up a dye stuffs in-dustry in the United States to take the place of the German supply on which this country has hiretofore been dependent, may induce the President to assent to placing a protective duty on

"While the President and the secrerepeal of the free sugar clause, they contend that they are not favoring a protective duty, but merely advocating this change to perfect the Underwood law as a "tariff for revenue only"

"Proceeding on that same theory, changes, such as the imposition of a duty on lumber, on dye stuffs, possibly on wool and other commodities, on the same theory, for the admissions they have made-thus far demonstrate that the Underwood law as it stands s not efficient when it comes to raising sufficient revenue to meet current government expenses, Pressure On Administration

"If the President does not recom-mend a duty on lumber, he may expect to find some Democratic senators sup-porting a lumber amendment to the sugar bill when the time for offering

amendments arrives.
"Senators Chamberlain and Lane, having spent the summer in Oregon, will be under strong pressure to sup-port a humber amendment, as will the senator from Louisiana. Senator Poindexter of Washington voted for the Underwood bill, but having announced himself a candidate for re-election as a Republican, will be counted as favor ing a lumber amendment Hold-Up Threatened

"The two Demogratic senators from Montana will be urged to vote for a duty on lumber, as will Senator Phelan of California, Senator Johnson of Maine and Senator Husting of Wisconsin.

"If all these senators join with the Republicans, they can force the adoption by the senate of an amendment to the hugar bill imposing a daty on lumber, and if the house refuses to accept the amendment these senators can hold up the sugar bill until the house falls into line,

POTASH MINES OF BAST GALICIA The deposit of putnsh sale at Kalusz, East Galacia, is more extensive than the famous Strassfurt mines in Germany. The potash salts occur over an aren of more than 1050 square miles Kalusz lies on the northeast slope of

the Carpathians. Beds of gypsum and clay overlie great deposits of Kainit sixteen to twenty feet thick at a depth of only 250 to 400 feet below the surface. These deposits contain sixty per cent of pure kainit. Below these beds at a depth of 750 to 800 feet are deposits of sylvine from thirty to fifty think. This layer contains forty-two per cent of pure chloride of potash phediately free from magnesium salts. The Carpathian ridge at the base of which this great natural deposit has been formed is a sandstone mass and the salts have been washed down from the rocks to accumulate during the aves in a geologic basin at the foot of their slopes.

Grass or hav placed in a pipe for a few days will cause it to smoke as sweetly as when it was new.